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# ORIGINAL

## Sauget Area 2 Superfund Site

EPA Meeting

Taken on: June 12, 2013

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1 U.S. Environmental Protection Agency

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Community Involvement Meeting

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for

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Sauget Area 2 Superfund Site

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St. Clair County, Illinois

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June 12, 2013

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1                   A Community Involvement Meeting was  
2 held at the offices of the Cahokia Village Hall, 103  
3 Main Street, in the Village of Cahokia, State of  
4 Illinois, on the 12th day of June, 2013 which was  
5 recorded by means of machine shorthand and hereto  
6 transcribed by Mary L. Peppenhorst, Missouri  
7 Certified Court Reporter (No. 545), Illinois  
8 Certified Shorthand Reporter (IL #084-003856),  
9 Registered Professional Reporter (#804416) and  
10 Notary Public.  
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1 APPEARANCES:

2 FOR THE EPA:

3 Ms. Patricia Krause

4 Community Involvement Coordinator

5  
6 Ms. Stephanie Linebaugh

7 Remedial Project Manager

8  
9 Mr. Paul Lake

10 Ms. Michelle Ryan

11 Mr. Robert Carson

12 Illinois EPA

13  
14 Ms. Lisa Condif

15 Mr. Phil Smith

16 Mr. Barrie Selco

17 CH2M Hill

(On the record at 6:38 p.m.)

MS. KRAUSE: Hello. Thank you for coming out tonight. We look forward to presenting and also to hearing from you. EPA's presentation will share details about the recommended clean up plan for the Sauget Area 2 Superfund Site. You will have the opportunity to formally make a comment or ask a question. A transcriber is here to take your comments and questions. During the public hearing that's the time for the public to talk and we will not be responding at this time. At the end of the comment period EPA will prepare a written statement of significant comments, criticisms and any new relevant information given along with EPA's response to each issue. We'll do a presentation, we'll take questions, have a short break, then start the public comments. If you'd like -- if you want to make a comment, you'll have a chance to do so. And it's not a big group. Sometimes we have people sign up but I think we can work it out where a person can make a comment. For introductions I'm Patricia Krause. I work as a community contact for the US Environmental Protection Agency. Stephanie

1 Linebaugh is EPA's project manager for the Sauget  
2 Area 2 site and she will talk about the site and  
3 explain EPA's proposed clean up plan. Also here  
4 from the Illinois EPA is Michelle Ryan, Paul Lake,  
5 Robert Carson and I believe that's it from Illinois  
6 EPA.

7 Okay. We have some ground rules for public  
8 comment and one of them is that everybody who wants  
9 to comment gets a chance. One speaker at a time.  
10 And, you know, there are some time limits so we ask  
11 to be considerate of that when you're making your  
12 comments. I'll call your name out and you can come  
13 up to the microphone -- well, no, I'll call you.  
14 Raise your hand that you want to speak. Please say  
15 your first and last name and spell your last name  
16 for our transcriber. And then also share if you're  
17 affiliated with an organization and then make your  
18 comment. So now we'll start with Stephanie.

19

20 BY MS. LINEBAUGH:

21 Good evening. As Pat mentioned, I'm  
22 Stephanie Linebaugh. I'm the EPA project manager  
23 for the Sauget Area 2 site and I'm here to present  
24 the proposed plan for the site. And just for your

1 reference, I have a couple images that you can look  
2 at as I'm going through the presentation. We're  
3 going to go through a couple of introductions. I'm  
4 going to discuss EPA's proposed plan. You can ask  
5 questions and get some answers -- or you're going to  
6 ask questions and there will be the opportunity to  
7 comment. So in addition to myself and Patty I also  
8 have EPA's contractor we have Lisa Condiff EPA's  
9 oversight contractor with CH2M Hill; Phil Smith,  
10 CH2M Hill; and Barrie Selco, CH2M Hill. And Paul  
11 Lake is here as well with Illinois EPA.

12 Just to give you an overview of the area in  
13 general, the Sauget Area 2 site is the site outlined  
14 in red. There's also some neighboring areas of  
15 CERCLA site up north in orange which is the Sauget  
16 Area One site which I was recently here giving a  
17 proposed meeting on. The outline in green is a RCRA  
18 facility, the Krummrich facility, which is also  
19 nearby in the area.

20 The Area 2 site consists of other sites O,  
21 P, Q, R and S. And this is another overview just so  
22 you can get an idea of the site you're looking at on  
23 the Mississippi River and there's a variety of  
24 industries in the area around the site. The site

1 consists of five inactive disposal areas O, P, Q, R  
2 and S. Three are closed landfills. P, Q and R, one  
3 consists of four former sludge lagoons which is site  
4 O and there's a former waste disposal site, site S.

5 Just an overview of the contamination  
6 history at the site, there's a variety of  
7 industrial, municipal waste and contaminated soils  
8 that are present in the closed waste disposal areas.  
9 Disposal areas contain a variety of like crushed  
10 drums, uncontained wastes, construction debris and  
11 miscellaneous trash. Contaminants include a variety  
12 of volatiles and semi-volatiles, organic compounds  
13 such as chlorobenzenes, benzene and there's PCB,  
14 dioxins and biphenyls as well as some of the main  
15 contaminants.

16 There has been a lot of work already done at  
17 the sites. We've already been making progress  
18 throughout the years. Beginning back in 1979  
19 Illinois EPA did construct the sand fills to cover  
20 site R which is the one closer to the river over  
21 here, put on a clay cover consisting of about five  
22 feet of clay over the waste disposal area at site R.  
23 And then again in 1985 Illinois had Monsanto again  
24 put some riprap along the river embankment. Then in



1 1995 and in 1999 EPA had two removal actions along  
2 site Q, one we removed about 17,000-tons of mainly  
3 PCB contaminated soils as well as over 3,200 drums  
4 were removed and disposed offsite. Then in 2000 EPA  
5 issued an order for the responsible parties to  
6 perform remedial investigation and feasibility study  
7 and there was the field work which was the remedial  
8 investigation part which spanned from 2000 to 2007  
9 and it was a quite extensive investigation with  
10 supplemental investigations on the site. In 2002  
11 there was an interim ROD for the operable unit two  
12 which is the groundwater and that -- the EPA issued  
13 an interim remedy for that. They constructed a  
14 barrier wall along site R. So this is site R  
15 (indicating). There was a barrier wall that was  
16 constructed around that disposal area. And the main  
17 focus of that interim remedy was for groundwater, to  
18 capture groundwater coming from -- contaminated  
19 groundwater coming from site R as well as capturing  
20 part of the off site sources as well. This also  
21 occurred the barrier wall and the groundwater  
22 migration and controls here are referenced as GMCS.  
23 Then in 2009 EPA finalized their remedial  
24 investigation report and summarized all the field

1 activities and kind of captured the nature and  
2 extent of the site and contamination of the site.  
3 And then this past May we finalized the feasibility  
4 study which kind of assessed all the data obtained  
5 to date and looking at alternatives to determine the  
6 best approach for remedying the sites.

7 So, as I mentioned, there was early action  
8 but we did do the removal actions on Q south along  
9 the river bank called Q central 95 and Q south was  
10 the drum removal as well as the soil removal and  
11 this just covers interim action map for OU2. To be  
12 more specific about the barrier wall, the 3500-foot  
13 span, site R barrier wall, goes down approximately  
14 135 feet and to the bed rock. There's a pump and  
15 treat system where the water is pumped. It's  
16 treated through the American Bottoms facility before  
17 being discharged in the river. It captures  
18 approximately 98 percent of the contaminated water  
19 from Area 2. It also captures a significant amount  
20 of contaminants from upgrade sources off the site.

21 So through the remedial investigation the  
22 disposal areas O, P, Q, R and S were identified as  
23 the source areas. There was also identified DNAPLs,  
24 dense non-aqueous phase liquid in groundwater under

1 portions of site P. And there was also some intact  
2 drums that were identified on site Q south. Just an  
3 overview of the human health risk assessment  
4 summary. The risk assessment evaluated trespassers,  
5 recreational fishers, industrial workers,  
6 construction and utility workers. It evaluated  
7 potential exposures to soil, waste, leachate,  
8 groundwater, surface water, sediments and fish  
9 tissue. Some of the main contaminants for the  
10 Sauget Area 2 sites were PCBs and dioxins. And  
11 potential risks above EPA's acceptable levels were  
12 identified at all the sites on Sauget Area 2.

13 The ecological risk assessment summary:  
14 Potential ecological risks evaluated on the  
15 Mississippi River and sites O, P, Q, R and S.  
16 There's no current ecological risks associated with  
17 sediments or surface water and potential risks to  
18 herbivores and carnivores were identified at site  
19 O and site Q south from dioxins and furans in soil.

20 So I'm going to go over an overview of the  
21 alternatives that we looked at for determining what  
22 was the best approach for identifying a remedy for  
23 the site. EPA always looks at a no action  
24 alternative. So for each of the sites O1, P1, Q

1 north 1, Q central 1, Q south 1, R1 and S1 they were  
2 evaluated as no action alternatives which has zero  
3 positives and says we do nothing.

4           So for site O these are the alternatives --  
5 For site O this is site O here (indicating), we had  
6 looked at three alternatives in addition to the no  
7 action alternative. Alternative O2 consists of a  
8 cap over the -- I'll just quickly describe the map.  
9 So this shows the outline of the cap areas that are  
10 being proposed for alternatives O2 and O4. The  
11 yellow shaded area is the extent of the cap that is  
12 in the proposed alternatives. The blue outlined  
13 areas are the areas of potential mobile source areas  
14 which are just areas that have really heavily  
15 contaminated soils. So there wasn't like any  
16 liquids identified in the area. They're potentially  
17 leachable soils. So for the O2 alternative the  
18 yellow area would be capped with the Illinois 35 IAC  
19 724 compliant soil cover over the yellow are in  
20 addition institution controls and access controls  
21 would be put in place.

22           Alternative 3 is similar as far as the  
23 extent of the covers except with Alternative 3 we  
24 looked at soil technology over those potential

1 leakable source areas identified. So the areas that  
2 are identified in green over the blue areas this  
3 alternative looked at photo technology in those  
4 areas with a 724 compliant cover over the remainder  
5 of the waste mass with institutional access control.  
6 And then the O4 alternative is similar to the OU2  
7 alternative except you would -- this one includes  
8 the RCRA subtitle C full design hazardous waste cap.  
9 And as you can see, the cost for Alternative two is  
10 \$6.3 million; Alternative 3, \$5.8; and Alternative  
11 four, \$16.2 million.

12 So for site P we evaluated in addition to  
13 the no action alternative there were three  
14 additional alternatives we looked at. So this is  
15 for sites P. The yellow areas are the areas that  
16 would have covers or caps on. The blue outline  
17 areas are, as I mentioned before, those are  
18 potential mobile source areas. The little black  
19 square up here, that's a parking lot and that would  
20 be -- when I speak of an asphalt cover area, that's  
21 what I'm speaking of. So for P2 it would be an  
22 asphalt cover over the potential mobile source area  
23 that's around the parking lot. This site would get  
24 an 807 cover over the yellow areas, which is the

1 waste, the waste mass. It would include vapor  
2 intrusion mitigation as well as institutional  
3 controls. There's also -- so that's alternative P2.

4 For alternative P3 there would be an  
5 addition of NAPL collection. As I identified  
6 before, there was a NAPL identified in site P and  
7 there would be collecting of NAPL in this area as  
8 well. With the covers going over the yellow area as  
9 well and it would be the 807 solid waste landfill  
10 covers. This would also include the vapor  
11 mitigation -- vapor intrusion mitigation as well  
12 as institutional and access controls.

13 Alternative P4 would include as developed  
14 for alternative P3 the asphalt cover over the  
15 parking lot area and mobile source area, a RCRA  
16 subtitle C design cover over the yellow areas, and  
17 as well as the vapor intrusion mitigation and  
18 institutional controls.

19 So for site Q north then in addition to the  
20 no action alternative we evaluated four  
21 alternatives. And for site Q north alternative 2 we  
22 looked at the yellow areas a 724 compliant cover  
23 over the dog leg area, it's like part of Q north is  
24 the yellow outlined area, vapor intrusion mitigation

1 as well as institutional controls and access  
2 controls.

3 Q north 3 alternative, identical to Q north  
4 2 except we are looking at a RCRA subtitle C  
5 hazardous waste cap over the yellow area.

6 And for Q north 4 there would be a RCRA  
7 subtitle cover over the whole extent of Q north.  
8 And there would be identified waste areas vapor  
9 intrusion mitigation and institutional access  
10 controls.

11 And then for -- so Q5 is similar to Q north  
12 here except the yellow areas would be just the 724  
13 compliant crushed rock cover over the yellow areas  
14 with a vapor mitigation -- vapor intrusion  
15 mitigation and institutional and access controls.

16 For site Q central the alternatives we  
17 looked at were alternative Q central 2 we're looking  
18 at over the yellow areas -- I don't know if you guys  
19 can see but the highlighted yellow shaded there  
20 there's a blue area at the bottom. That's again,  
21 one of those potential mobile source areas where  
22 it's just identified as heavily contaminated soil.  
23 Not heavily but they're above TACO, the Illinois  
24 TACO limit a hundred times. So they have that

1 potential to leach.

2 And then the orange, I don't know if you can  
3 see the orange part but that's been identified as  
4 the risk area is the orange dash outline which is  
5 hard to see. Anyway, alternative 2 for this site  
6 consists of 724 compliant crushed rock cover over  
7 the identified waste areas which is the shaded  
8 yellow and institutional and access controls as well  
9 as erosion protection along the river.

10 Alternative QC3 includes the 724 compliant  
11 cover over the identified waste areas, shoreline  
12 protection along the river, soil vapor extraction in  
13 the blue circled area which is the area of potential  
14 mobile source area and then institutional and access  
15 controls.

16 And then site QC4 alternative is the same  
17 identified shaded yellow area would be the RCRA  
18 subtitle C designed cover over some of the  
19 identified waste areas, shoreline protection along  
20 the river abatement and institutional and access  
21 controls.

22 Site Q south alternatives, so just to point  
23 out the yellow areas are the areas that would have  
24 proposed capping or covers. The blue areas are the



1 potential mobile source areas. The green area is an  
2 area that we identified as principal plant waste.  
3 The light blue area is an area that was identified  
4 as potential ecological risk area. So for Q south 2  
5 this would include removal of intake drums which are  
6 identified in the green circle. 724 compliant  
7 crushed rock cover over the identified risk areas,  
8 the yellow areas, and institutional and access  
9 controls.

10 Q south 3 would include removal of intact  
11 drums, 724 crushed rock cover over identified waste  
12 areas and institutional and access controls.

13 And then Q south 4 is the same except it  
14 would include a RCRA subtitle C designed cover over  
15 the yellow areas and institutional and access  
16 controls.

17 For site R in addition to no action, we  
18 looked at two alternatives. Alternative R2 is a 724  
19 compliant cover over the entire site which is also  
20 identified as, you know, potential mobile source  
21 area over the entire site here for site R and  
22 institutional and access controls. Alternative R3  
23 we're looking at a RCRA subtitle C cover over the  
24 entire site R in addition to the institutional and

1 access controls.

2 Site S alternative is a much smaller area.  
3 It's about apron size. We looked at alternative S2  
4 which is a 724 compliant soil cover over the entire  
5 area and institutional and access controls.

6 S3 in situ treatment of the potential mobile  
7 source areas which is the blue outline which is the  
8 entire site. A 724 compliant cover over the entire  
9 site and institutional and access controls.

10 And alternative S4 would include the RCRA  
11 subtitle C cover over the entire site with  
12 institutional and access controls.

13 Part of the process of coming through with a  
14 remedy for a site we looked at nine remedy selection  
15 criteria and those include the threshold criteria  
16 which is overall protection of human health and  
17 environment as well as compliance with our  
18 applicable and relevant and appropriate requirements  
19 which we call ARARs, our balancing criteria which is  
20 longterm effectiveness and performance, reduction of  
21 toxicity, mobility for volume through treatment,  
22 short term effectiveness and implementability and  
23 cost. And we have modified criteria of state  
24 acceptance and then community acceptance which is

1 one of the reasons we're here tonight.

2 So in going through all the alternatives for  
3 each of the sites we evaluated them against our nine  
4 criteria. So you can see for site O that no action  
5 does not meet any of the criteria but the other  
6 alternatives do. And I'll just go back. In looking  
7 at all the other alternatives they do meet -- this  
8 is for site P, again, no action does not meet the  
9 criteria. The other alternatives do meet the  
10 threshold criteria. And for site Q north the no  
11 action does not meet our threshold criteria, nor  
12 does Q north 3 meet the ARARs or Q north 4. For  
13 site Q central the no action alternative does not  
14 meet our threshold criteria and for Q central 4 it  
15 is not in compliant with the ARARs. And for Q south  
16 it does not -- no action does not meet our threshold  
17 criteria, nor does Q south 4. For our site R no  
18 action does not meet the threshold criteria, nor  
19 does the site alternative R3. And for site S the no  
20 action does not meet the threshold criteria but the  
21 other alternatives do.

22 So EPA's recommended alternatives for the  
23 Sauget Area 2 site are O2, P3, Q north 2, Q central  
24 3, Q south 3, R2 and S3. These alternatives are

1 protective of human health and environment. They  
2 meet the state and federal regulations for the  
3 ARARs. They're implementable. They reduce  
4 toxicity, mobility or volume through some treatment.  
5 They provide long term and short term effectiveness  
6 and those alternatives are supported by the state of  
7 Illinois.

8 The estimated total cost for this remedy is  
9 \$20.8 million. And the next steps fast forward,  
10 we've already implemented early action completed the  
11 remedial investigation phase. Just completed the  
12 feasibility study. So today we're here to give the  
13 proposed plan, preferred remedies and alternatives  
14 for clean up at the site. The next step will be  
15 once we present tonight, we hear your comments  
16 during the 30-day comment period, EPA will prepare a  
17 responsive summary which will be part of our record  
18 of decision, which is our final decision for the  
19 remedy selection for the site. That is scheduled to  
20 be completed in 2013. The next step after that  
21 would be remedial design, most likely in 2014.  
22 Remedial action implementation beginning in 2015  
23 estimated and then after that every five years there  
24 will be a five year review. The public comment

1 period is a 30-day period. It started last Friday,  
2 June 7 and will run through July 8. We have  
3 documents for your review online at the website for  
4 the site as well as the Cahokia public library. And  
5 in addition to that we have all the documents at the  
6 EPA region site office. And you can send your  
7 public comments to Patty Krause who is the community  
8 involvement coordinator. And this information is  
9 also in the fax sheet that was mailed out to  
10 everyone. So if there's questions, we'll ask  
11 informal questions and then we'll take a break and  
12 open it for official comment.

13 AUDIENCE MEMBER: Could you explain the  
14 potential mobile source areas, which direction does  
15 it move, how does it move, why does it move, does it  
16 move up and down, does it move laterally?

17 MS. LINEBAUGH: The potential mobile source  
18 area is just soil that's contaminated above TACO  
19 limits of times a hundred. So it's not actually  
20 mobile. It just has that potential of leaching and  
21 maybe Phil if you want to try and answer it.

22 MR. SMITH: Yeah. It's soil that's  
23 contaminated above a hundred times above the TACO  
24 limits. So it has the potential to leach but for

1 now it hasn't leached very much. We have monitoring  
2 wells down regularly. So in many cases even though  
3 the soil suggested it could leach, it's fairly open  
4 to leakable soil so not much leaching is occurring.

5 AUDIENCE MEMBER: How does the river level  
6 affect the sites?

7 MS. LINEBAUGH: You mean the rising and  
8 dropping river level? I mean, the water table is  
9 pretty low, it's about 10, 15 feet, the water level  
10 at the Area 2 site. So when the water -- the river  
11 is high the water level comes up so I mean it's  
12 going to be higher than the waste.

13 MR. SMITH: It does reverse the gradient  
14 occasionally and the gradient will come back a ways  
15 but the net long term effect is still towards the  
16 river.

17 AUDIENCE MEMBER: Is local ecological  
18 enhancement or restoration being considered for any  
19 mitigation of any of these impacts or is it purely  
20 from a contaminants standpoint?

21 MS. LINEBAUGH: We're looking at protecting  
22 human health and environment is our main focus but I  
23 know there is an NRD, National Resource Trustees,  
24 that are looking at the site as well for damages,

1 resource damages.

2 AUDIENCE MEMBER: My name is Dave Jump,  
3 J-U-M-P, and this might be a stupid question but  
4 site Q isn't shaped the same here as it is there.  
5 Can you tell me which one is right?

6 AUDIENCE MEMBER: Looks like it goes all the  
7 way to the river on the eastern edge.

8 MS. LINEBAUGH: I see what you're saying.  
9 It looks like this is accurate.

10 AUDIENCE MEMBER: That one is accurate?

11 MS. LINEBAUGH: That one is correct, not  
12 this one.

13 AUDIENCE MEMBER: Okay. But that sort of  
14 area closer to the river you're not planning on  
15 doing anything --

16 MS. LINEBAUGH: That triangle that's like  
17 right here (indicating)?

18 AUDIENCE MEMBER: No. You're not planning  
19 on doing anything over here (indicating)?

20 MS. LINEBAUGH: This is site Q south, this  
21 area (indicating).

22 AUDIENCE MEMBER: But I think you were  
23 showing all the things you were proposing sort of  
24 over here, not over here (indicating).

1 MS. LINEBAUGH: They're kind of over here in  
2 the area. There's like the two ponds.

3 AUDIENCE MEMBER: So everything kind of this  
4 side of the rail track toward the river you're not  
5 doing anything?

6 MS. LINEBAUGH: Right.

7 AUDIENCE MEMBER: Okay.

8 MS. LINEBAUGH: Can you put QS3 up? That's  
9 under the cover.

10 AUDIENCE MEMBER: Can you show me site O?  
11 Are you aware that there's work to change to put in  
12 an overpass that might cause a rail track to come  
13 through here (indicating)? Is that okay?

14 MS. LINEBAUGH: That's the first I've heard  
15 of that. I'm not aware of that.

16 AUDIENCE MEMBER: But I mean as long as it's  
17 sort of up on top of everything that's okay, isn't  
18 it?

19 MS. LINEBAUGH: I wasn't aware of it.

20 AUDIENCE MEMBER: You mentioned when you  
21 were giving your presentation about dioxin but yet I  
22 don't remember seeing dioxins listed anywhere on any  
23 of the sites. Where are they and why aren't they  
24 listed?



1 MS. LINEBAUGH: Well, dioxins were just  
2 like -- they're evaluated during the risk  
3 assessment. So I'm going to have to talk with  
4 Barrie.

5 MS. SELCOE: Dioxins were present in the  
6 soils I believe at all of the different sites and it  
7 caused the risk estimates for different receptors to  
8 exceed EPA's acceptable levels and that's why the  
9 covers are being placed on the different sites.  
10 Dioxin was one of the main chemicals that would  
11 cause that decision to be made.

12 MS. LINEBAUGH: And it was for direct  
13 contract.

14 MS. SELCOE: That's right. By construction  
15 workers hypothetically.

16 MS. LINEBAUGH: This is just simplified in  
17 the mailings that you get. It's more streamlined  
18 but there's also a technical proposed plan that has  
19 more details and more information.

20 MS. ANDRIA: That's a huge -- something to  
21 leave out, I think so, dioxin.

22 MS. LINEBAUGH: We do mention dioxins in the  
23 technical lingo. We list all the risk assessments.

24 MS. ANDRIA: The people reading this, the

1 same -- calling something an oily liquid and not  
2 identifying what it is is something that I think  
3 that's problematic. Anyway, let me go on. Do you  
4 have the diagrams in color, the insets? How you  
5 have them identified in a different color. That's  
6 very helpful. Do you have those on the website? I  
7 don't see them.

8 MS. LINEBAUGH: They're on the -- the one  
9 selected alternatives are included with the  
10 technical plan. And also the feasibility study is  
11 fully available on the website as well. So all the  
12 pictures are on the website as well as at the  
13 Cahokia library and the EPA office.

14 MS. ANDRIA: I want to go through a couple  
15 of the sites, I have a couple questions. Site O you  
16 talk about what the PCBs, oil and materials, heavy  
17 metals and other hazard substances. What other  
18 hazard substances in site O?

19 MS. SELCOE: If I could mention, the  
20 chemicals of concern that are driving the decisions  
21 dioxins and PCBs in surface soil and the same in  
22 subsurface soil and PCBs in the leechate material.

23 MS. LINEBAUGH: For site O?

24 MS. SELCOE: For site O north. There were

1 no risk driving chemicals in site O south.

2 MS. ANDRIA: Did you collect groundwater  
3 samples from this site? No. Why did you collect  
4 groundwater samples from this site and either not  
5 collect them at the other sites or not put them in  
6 the materials so people know?

7 MS. LINEBAUGH: Mentioned in the proposed  
8 plan, this proposed plan is directing soil and  
9 groundwater source areas. There will be a  
10 groundwater regional remedy selected that looks at  
11 the region groundwater between area one, Area 2 and  
12 regionally address groundwater. That will be a  
13 separate operable unit.

14 MR. SMITH: I was just going to add that we  
15 did investigate all the sites for groundwater and  
16 that will be in the RI report, the groundwater plume  
17 maps. So it has comprehensive maps for each  
18 hydrologic unit.

19 MS. LINEBAUGH: And the RI is available at  
20 the library, on the website, as well as the EPA  
21 office repository.

22 MS. ANDRIA: You mentioned that there were  
23 DNAPLs at site P. Are there DNAPLs at other sites?

24 MS. LINEBAUGH: Site P there was a defined

1 DNAPL. There was DNAPLs identified on Q north but  
2 that's groundwater and everything from that, those  
3 two areas, they are in Q north as being captured by  
4 the groundwater migration containment system.

5 MS. ANDRIA: Have you investigated the -- I  
6 mentioned at the area one hearing about the flood  
7 prevention district plans to pump groundwater. Have  
8 you investigated what that will do? How that will  
9 relate to this site and what it will do to the  
10 DNAPLs at the various sites here?

11 MS. LINEBAUGH: Well, the Army Corps has  
12 proposed that EPA can comment as well as Illinois  
13 EPA can comment in a couple years. In 2008 they  
14 revised their plan due to comments. They're looking  
15 to put in fresh relief wells along the levee that  
16 would be utilized in an emergency need of flooding.  
17 Might actually mean that those relief wells would  
18 pump most likely from the shallow aquifer which is  
19 much lower contaminants.

20 MS. ANDRIA: They have some of their oils  
21 are as deep as 64 feet I believe. That's pretty  
22 deep, isn't it?

23 MS. LINEBAUGH: Yeah.

24 MR. LAKE: It's in the middle.

1 MS. LINEBAUGH: Maybe you've seen more than  
2 I've seen. I didn't know that they were that deep.

3 MS. ANDRIA: When was the last time you've  
4 gone?

5 MS. LINEBAUGH: It's probably been a couple  
6 of years since I've seen any revisions.

7 MS. ANDRIA: I think you need to re-visit.  
8 Have you quantified the damage to natural resources?

9 MS. LINEBAUGH: That's -- There's a natural  
10 resources trustee group that's active in resource  
11 damages.

12 MS. ANDRIA: So when do we see that?

13 MS. LINEBAUGH: Paul, can you?

14 MR. LAKE: Well, I'm aware. I'm part of  
15 that group and we've been working on the assessment  
16 plan for the natural resource damages and we're  
17 looking forward to having a public meeting to  
18 discuss that assessment plan in the not too distant  
19 future. We don't have a date set yet but the plan  
20 is supposed to go to the federal register and not  
21 too long after that we're going to have a public  
22 meeting. So, you know, I think you'll be on our  
23 mailing list.

24 MS. ANDRIA: Okay. Site S, have the drums

1 removed been removed from the site?

2 MS. LINEBAUGH: On site S? There are no  
3 drums on site S.

4 MS. ANDRIA: They have not?

5 MR. SMITH: I don't recall us finding drums  
6 there.

7 MS. ANDRIA: Says it was a drum disposal.

8 MS. LINEBAUGH: Waste disposal.

9 MR. SMITH: It was a waste disposal area for  
10 sure. It's heavy contaminated soil.

11 MS. ANDRIA: So there haven't been?

12 MS. LINEBAUGH: No. I'm not aware of any  
13 drums. It was just a waste disposal area. There  
14 was no like drum disposal that we've been aware of  
15 or identified during the investigation. There were  
16 drums disposed on Q south that we've identified.

17 MS. ANDRIA: This is on your thing on site S  
18 I believe.

19 MS. LINEBAUGH: It says there's a waste  
20 disposal. It does say a drum disposal area but it's  
21 a waste disposal area cause there were no drums in  
22 site S.

23 MS. ANDRIA: What do the groundwater samples  
24 from that area show?

1 MS. LINEBAUGH: Excuse me?

2 MS. ANDRIA: What do the groundwater samples  
3 for site S show?

4 MS. LINEBAUGH: I don't know off the top of  
5 my head.

6 MR. SMITH: I don't recall precisely. I was  
7 expecting them to show considerable number of VOCs  
8 but I do recall it showed a lot less than I was  
9 expecting. I can't answer specifically. I can look  
10 up the maps on my computer and I'll tell you in a  
11 minute.

12 MS. ANDRIA: Your alternative 3 is \$1.1  
13 million -- I mean \$1.0 million and S4 which puts a  
14 cap that promotes surface water drainage and  
15 minimizes infiltration cost less. Why is this  
16 alternative cheaper site?

17 MS. LINEBAUGH: Which site are you on.

18 MS. ANDRIA: Site S. I'm still on S. I'm  
19 sorry.

20 MS. LINEBAUGH: What was your question  
21 again?

22 MS. ANDRIA: If you're putting a more  
23 protective cover, a soil cover related cap on to  
24 minimize infiltration why is it cheaper?

1 MS. LINEBAUGH: Than which one?

2 MR. LAKE: Than the preferred alternative.

3 MS. LINEBAUGH: The preferred alternative  
4 we're doing that soil vapor extraction over the  
5 entire site in addition to the 724 cover.

6 MS. ANDRIA: So that \$300,000 is -- there's  
7 no soil -- there's no vapor?

8 MS. LINEBAUGH: Not with the RCRA cap, no.

9 MS. ANDRIA: Site P?

10 MS. LINEBAUGH: I just want to see if  
11 there's anyone else that might have a question.  
12 There's a gentleman in the back.

13 MR. ALLEN: My name is Chris Allen. I just  
14 have a couple of questions. One, you have a  
15 remediation, proposed remediation plan that's going  
16 to cost X number of dollars. Then you mentioned  
17 that there were some issues that still needed to be  
18 dealt with as it related to groundwater.

19 MS. LINEBAUGH: Uh-huh.

20 MR. ALLEN: And will that potentially add  
21 costs to the remediation?

22 MS. LINEBAUGH: Well, the groundwater -- so  
23 for this proposed plan we're addressing contaminated  
24 soils and groundwater source areas. And then



1     there's also at site area one which I identified  
2     over in this area (indicating) I just presented a  
3     proposed plan back in March on those sites for the  
4     soil contamination as well as groundwater source  
5     areas. Those two sites have a commingling of the  
6     groundwater. So once those remedies are implemented  
7     we'll be looking at a regional groundwater remedy  
8     for the area for both sites.

9             MR. ALLEN: So there will be some additional  
10    costs to deal with that issue?

11            MS. LINEBAUGH: Potentially, yes. But,  
12    again, that's part of the process. We'll have to  
13    look at alternatives for selecting a remedy for the  
14    groundwater.

15            MR. ALLEN: Thank you.

16            MR. JUMP: When you're talking about a  
17    ground cover or a rock cover how much are you  
18    talking? 6 inches of rock? 6 feet of rock?

19            MS. LINEBAUGH: Well, for site Q, the  
20    crushed gravel covers are 12 inches. For the other  
21    like for site P it's 24 inches of cover for the 807  
22    solid waste cap. And then there's also for the soil  
23    covers on O it's 24 inches as well.

24            MR. JUMP: 24 inches of soil?

1 MS. LINEBAUGH: Yeah. 0 is 24 inches total  
2 like the current -- Phil, do you have that?

3 MS. CONDIFF: It's in the FS.

4 MS. LINEBAUGH: It's in the FS? Oh, it's  
5 right there.

6 MR. JUMP: Is that like any kind of soil or  
7 do you have to use clay?

8 MS. LINEBAUGH: They're not -- for which  
9 site or for all?

10 MR. JUMP: Any place you're using soil.

11 MS. LINEBAUGH: Where there's soil it's 6  
12 inches of soil top cover and then.

13 MR. SMITH: 18 inches of the --

14 MS. LINEBAUGH: 18 inches of the clay.

15 MR. JUMP: Clay? Okay. Like compacted?

16 MS. LINEBAUGH: Compacted clay.

17 MR. JUMP: Okay. Got it.

18 MS. ANDRIA: You have a no action  
19 alternative but you don't have a top of the line  
20 alternative that removes the contaminants from the  
21 floodplain; could you tell me why?

22 MS. LINEBAUGH: Well, during the  
23 investigation we were looking at identifying areas  
24 of risk that need to be addressed. Not the full

1 like waste mass is not an area of risk let's say.  
2 So removing the entire waste mass is not an  
3 alternative that needed to be evaluated.

4 MS. ANDRIA: Even though it's in the  
5 floodplain?

6 MS. LINEBAUGH: Even though it's in the  
7 floodplain doesn't mean that there's a risk. We're  
8 looking at the risk associated with these sites to  
9 the ones closest on the river side. The risk is the  
10 subject of direct contact for potential construction  
11 and utility workers. So there wasn't an estimated  
12 risk of direct contact. So just eliminating that  
13 risk for an exposure pathway with a cover makes the  
14 protection to health and environment. So there's no  
15 need to remove all that material.

16 MS. ANDRIA: I wanted to ask your consultant  
17 to um also -- I want to know what the groundwater  
18 are samples at the other sites were that weren't  
19 listed?

20 MS. LINEBAUGH: Phil you want to talk to  
21 that?

22 MR. SMITH: Each of the sites has their own  
23 array I guess. It's best to look at the plume maps  
24 we published for I think for about 12 different

1 contaminants. The ones that were most prevalent  
2 across the whole area one and Area 2 sites the  
3 plumes are rather large. Chlorobenzene is the main  
4 contaminant. It's not necessarily associated with  
5 the Area 2 sites other than site R. Site R  
6 obviously was the most contaminated site and that's  
7 why the GCMS went around and captured 98 percent of  
8 the contaminant mass in groundwater from all the  
9 Area 2 sites. So that's the big thing. The other  
10 two percent of contamination is much less in  
11 concentration and in isolated areas from the other  
12 Area 2. Like Q central has some chlorobenzene, I  
13 recall that, specifically coming from that. It's at  
14 150 micrograms per liter whereas the standard is a  
15 hundred. So it's over it but not grossly over like  
16 some of the other plumes are. Benzene is  
17 associated with Q south. I know that. Other  
18 contaminants site P was remarkably devoid of  
19 contamination emanating from that. I remember that.  
20 Very little, if anything. What else? Those are the  
21 big players that I recall. But if you were to go  
22 through those plume maps you could actually  
23 physically see and look at the unit maps. There  
24 will be like 12 of them. And each one you can look

1 at the site and see if it's down gradient. You also  
2 see big yellow areas designating plumes coming  
3 beneath them or onto them from up gradients from  
4 Area 2 from Krummrich.

5 MS. LINEBAUGH: And all the maps that Phil  
6 mentioned are part of the feasibility study and  
7 that's available online and in the library and at  
8 the RI.

9 MS. ANDRIA: Did you say that -- I can't  
10 remember whether I asked this or not, on site R that  
11 you removed some of the drums. Are you going to  
12 leave only the in tact ones there or --

13 MS. LINEBAUGH: For Q south?

14 MS. ANDRIA: For site R?

15 MS. LINEBAUGH: I'm not aware that there are  
16 drums that we left.

17 MR. SMITH: Site R was not investigated  
18 internally very much so we wouldn't know. I  
19 wouldn't be surprised if there's drums. That's not  
20 the issue. It's been contained. We did quite a lot  
21 of investigation to locate drums across all sites  
22 and then went in specifically to most of the sites  
23 and dug up those magnetic anomalies to look for  
24 drums. And it was only in Q south that we actually

1 found in tact drums that were excavated and removed.  
2 Site R, I don't recall.

3 MS. LINEBAUGH: There's already like five  
4 feet of clay cap already on Site R. Any other  
5 questions?

6 MS. KRAUSE: We'll take a short break and  
7 come back and we'll go in to the formal comment  
8 period.

9 (Whereupon, there was a break in  
10 the proceedings. The testimony  
11 resumes as follows:)

12 MS. KRAUSE: This is the formal public  
13 comment hearing. So this is where you'll state your  
14 name, spell your last name, and then make your  
15 comment. And it won't be -- this is where we don't  
16 answer the questions. And then Mary is our court  
17 reporter, our transcriber, and she'll take down the  
18 information. And this will be something that we  
19 collect your public comments and it will be part of  
20 the RCRA decision and we'll respond to them in the  
21 public responsive summary. So we can start with our  
22 comments, raise your hand, but state your first name  
23 and spell your last name and also if you're  
24 affiliated with a group. So let's start.

1 MS. ANDRIA: My name is Kathy Andria.  
2 A-N-D-R-I-A. I'm president of the American Bottom  
3 Conservancy and conservation chair for the Kaskaskia  
4 Group of the Sierra Club. Both groups have members  
5 who would be impacted by your decision in this  
6 matter. I'd also like my questions and your answers  
7 from the question period to be placed in to the  
8 official comment section.

9 There have been several sand boils in the  
10 Metro East levee system designed to protect the  
11 Sauget/Cahokia/East St. Louis area from the  
12 Mississippi River. Have you taken in to account the  
13 present condition of the levee since using your  
14 alternatives. Have you taken in to account climate  
15 change more intense rainfall and snow storms  
16 resulting in higher river levels and their impacts  
17 on levees in choosing your alternatives. And most  
18 importantly, do you realize that the Southwestern  
19 Illinois Flood Prevention District's plan to repair  
20 the levees in conjunction with the Corps of  
21 Engineers includes bringing up water from relief  
22 wells as much as 64 feet deep and pumping it  
23 untreated into adjacent wetlands and the river.  
24 There are a number of such relief wells proposed in

1 the stretch from East St. Louis through Sauget and  
2 Cahokia. This has the potential to bring up DNAPLs  
3 to the surface which totally negates all your  
4 proposed alternatives. Despite your plans to keep  
5 the contaminants in place and eliminate exposure to  
6 humans and wildlife, those efforts will be undone by  
7 the breaking up of contaminants in the groundwater  
8 to the surface. It is crucial that you include the  
9 Corps and the levee project as part of this project.  
10 We very much appreciate your proposal to restrict  
11 future access to the sites but the groundwater  
12 pumping negates that restriction.

13 The Southwestern Illinois Flood Prevention  
14 District plan is to repair the levees to get 100  
15 year or 1 percent certification from FEMA and the  
16 Corps so that development can continue in the  
17 floodplain. The Corps admits it has not considered  
18 climate change in its equation to determine a 100  
19 year event. Some scientists have suggested that the  
20 100 year event is really just a seven year event.  
21 Getting certification by FEMA is expected by 2015.  
22 It could be many more years before the Corps has  
23 funding to repair the levees to the authorized level  
24 of protection said by the Corps variously to be a



1 500-year level or a 350-year level. Again, they  
2 have not considered climated change in their  
3 determination.

4 Development in the floodplain will cause  
5 increased interior flooding which will impact the  
6 Sauget area sites, Area 2 sites, and cause increased  
7 water on the landward side of the levee, coupled  
8 with higher river levels on the other side of the  
9 levee that will put the levees protecting the  
10 American Bottom at severe risk. In addition, we are  
11 in the New Madrid seismic zone and the area is at  
12 risk for severe liquefaction. Our levees were built  
13 on sand and not built to withstand an earthquake.  
14 Scientists say the New Madrid is due for a major  
15 event. Have you considered the potential for  
16 earthquakes and levee failure in your risk  
17 assessments or in choosing your alternatives?

18 Number three of the evaluation criteria for  
19 superfund clean up alternatives is long term  
20 effectiveness and permanence. That is how well an  
21 alternative will work over the long term, including  
22 how safely remaining contamination can be managed.  
23 How will the contamination be managed in the event  
24 of a levee breach? How will the contamination be

1 managed in the event of an earthquake? How will the  
2 contamination brought to the surface by the levee  
3 repair project relief wells be managed?

4 On all sites you list a no action  
5 alternative but you fail to list a remove from the  
6 floodplain alternative. Given the nature of the  
7 site in the floodplain and given the vulnerability  
8 of the levees and climate change impacts we strongly  
9 urge you to do so. How does covering the  
10 contaminants in place rather than removing them  
11 entirely from the floodplain satisfy the Superfund  
12 evaluation criteria for long term effectiveness and  
13 permanence.

14 The Illinois EPA has already granted the  
15 FPDC a 401 permit that allows the levee districts to  
16 pump groundwater from relief wells untreated into  
17 the river, including the Sauget Superfund area. At  
18 the public hearing for Sauget Area 1 I asked what  
19 impacts that would have. I believe you indicated  
20 that it would effect Sauget Area 2, the sites nearer  
21 the river and that I should bring it up at this  
22 hearing.

23 While I understand there are discussions and  
24 design work underway by the Corps to construct an

1 additional barrier wall or walls, I don't believe  
2 there has been a change in the plans to pump  
3 groundwater untreated from the wells. And given  
4 what Stephanie said, I'm not sure that there's been  
5 the communication that I requested between the Corps  
6 and the EPA.

7 We renew our concern and believe that that  
8 must be a part of your consideration for this  
9 project and that you must ensure that the Corps does  
10 not allow that. We also believe that the cost of  
11 any treatment of water from relief wells in this  
12 area should be paid for by the PRPs of Sauget Area's  
13 1 and 2 rather than by the levee districts and  
14 taxpayers. It is up to you to enforce that.

15 In addition, any barrier walls constructed  
16 by the Corps or the FPDC in the area of Sauget Areas  
17 1 and 2 should be funded by the PRPs, not taxpayers.  
18 They have caused the contamination and must bear the  
19 costs of dealing with the contaminants.

20 The risk assessments look at the different  
21 ways people may be exposed and then determine the  
22 potential health risks. Was a risk assessment  
23 performed to look at the potential of a levee  
24 breach? Flood water carrying contaminants and

1 perhaps scouring covered landfills could expose  
2 residents in Sauget and Cahokia to toxic waters.  
3 The contaminated flood water would also be carried  
4 downstream to other communities and in to water  
5 supplies.

6 We renew our concern for the damage to  
7 natural resources and look forward to commenting on  
8 that but shouldn't that have been determined before  
9 selecting cleanup alternatives? That's all the more  
10 reason to remove all contaminants from the  
11 floodplain. Quoting from you "Ecological risk  
12 assessment evaluated potential effects to fish and  
13 wildlife from exposure to chemicals in the  
14 Mississippi River. Lowered risk to people and  
15 aquatic organisms and no adverse ecological impacts  
16 were identified from the sediment in the Mississippi  
17 River. No risks to fish populations including  
18 federal engaged pallid sturgeon.

19 The ecological risk assessment did not  
20 evaluate the risk to fish and wildlife due to levee  
21 project pumping groundwater from relief wells  
22 bringing contaminated groundwater to the surface and  
23 releasing it untreated to the river and adjacent  
24 wetlands.

1 Partial cleanups are not permanent and could  
2 endanger people, wildlife and the environment both  
3 from levee relief well pumping and in the event of a  
4 levee breach. The alternatives must include the  
5 removal of contaminants from the floodplain.

6 You must include the levee projects relief  
7 well pumping under your plan and the PRPs must be  
8 directed to pay for the cost of treating the  
9 contaminated water.

10 We want to thank the people from all the  
11 agencies who have worked so hard for so long on  
12 these sites. We know how complex the site is, how  
13 horrific the contamination is and how difficult the  
14 decisions are, but the decisions you make could have  
15 grave impacts upon the people of our communities, on  
16 those living downstream, on the fish and wildlife  
17 and the echo system. Those who have caused this  
18 contamination must be made to pay to clean it up and  
19 you must not allow the levee repair project to undo  
20 the safeguards you are trying to put in otherwise  
21 all your work, your efforts, your plans are for  
22 naught. Thank you.

23 MS. KRAUSE: Anybody else? Now if you don't  
24 want to make a comment here, we have the comment

1 form in the fact sheet and there's also a link on  
2 the EPA's web page which is referenced in the fact  
3 sheet. And you could e-mail me comments, you know,  
4 and we have I believe through July 8th. The public  
5 comment period then is ended. Thank you.

6  
7 (Off the record at 7:55 p.m.)  
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24

1 State of Illinois

2 SS.

3 County of Madison

4 I, Mary L. Peppenhorst, a Certified Court  
5 Reporter in and for the State of Illinois, duly  
6 commissioned, qualified and authorized I hereby  
7 certify that I was attended at the offices of  
8 Cahokia Village Hall, 103 Main Street, in the City  
9 of Cahokia, State of Illinois, by the aforesaid  
10 parties; on the 12th day of June, 2013.

11 Said public and EPA comments being by me  
12 reported in shorthand and caused to be transcribed  
13 into typewriting, and that the foregoing pages  
14 correctly set forth the comments of the  
15 aforementioned, together with the questions  
16 propounded and remarks thereto, and is in all  
17 respects a full, true, correct and complete  
18 transcript of the questions and propounded to and  
19 the answers and comments given by attendees.

20 I further certify that I am not of counsel  
21 or attorney for any of the parties, not related to  
22 nor interested in any of the parties or their  
23 attorneys.

24

Completed this 2nd day of July, 2013.

*Mary L. Peppenhorst*

Mary L. Peppenhorst

Missouri Certified Court Reporter

Illinois Certified Shorthand Reporter

Registered Professional Reporter

SUBSCRIBED AND SWORN TO  
before me this 2nd day of  
July A.D., 2013.

*Laura Davis*



NOTARY PUBLIC



## KEYWORD INDEX

|   |  |   |  |   |
|---|--|---|--|---|
| <b>\$</b>   | <b>2013</b> 19:20  | <b>807</b> 12:24 13:9<br>32:21  | <b>adverse</b> 43:15   | <b>ARARS</b> 17:19<br>18:12,15 19:3   |
| <b>\$1.0</b> 30:13  | <b>2014</b> 19:21  | <b>8th</b> 45:4   | <b>affect</b> 21:6   | <b>area</b> 4:7 5:2,23<br>6:12,13,16,19,20,<br>24 7:22 8:16 9:19<br>10:10,12 11:11,16,<br>18 12:20,22 13:7,<br>8,15,23,24 14:5,20<br>15:4,13,14,17<br>16:1,2,3,4,21 17:2,<br>5 18:23 20:18<br>21:10 22:14,21<br>23:2 26:11 27:6<br>29:9,13,20,21,24<br>32:1,2,8 34:1 35:2,<br>5,9,12 36:4 38:11<br>40:6,11 41:17,18,<br>20 42:12,16 |
| <b>\$1.1</b> 30:12  | <b>2015</b> 19:22 39:21  | <b>9</b>  | <b>affiliated</b> 5:17<br>37:24  | <b>Area's</b> 42:12   |
| <b>\$16.2</b> 12:11   | <b>24</b> 32:21,23,24<br>33:1  | <b>95</b> 9:9   | <b>agencies</b> 44:11  | <b>areas</b> 6:14 7:1,8,9<br>9:22,23 11:9,13,14<br>12:1,2,4,15,17,18,<br>24 13:16,22 14:8,<br>12,13,18,21 15:7,<br>11,19,23,24 16:1,<br>7,8,12,15 17:7<br>20:14 26:9 27:3<br>31:24 32:5 33:23<br>35:11 36:2 42:16   |
| <b>\$20.8</b> 19:9  | <b>3</b>   | <b>98</b> 9:18 35:7   | <b>Agency</b> 4:24   | <b>Army</b> 27:11   |
| <b>\$300,000</b> 31:6   | <b>3</b> 11:22,23 12:10<br>14:3 16:10 18:12,<br>24 30:12                   | <b>A</b>  | <b>Allen</b> 31:13,20<br>32:9,15   | <b>array</b> 34:23  |
| <b>\$5.8</b> 12:10  | <b>3,200</b> 8:3   | <b>A-n-d-r-i-a</b> 38:2   | <b>alternative</b> 10:24<br>11:7,17,22,23<br>12:3,6,7,9,10,13<br>13:3,4,13,14,20,21<br>14:3,17 15:5,10,16<br>16:18,22 17:2,3,10<br>18:13,19 30:12,16<br>31:2,3 33:19,20<br>34:3 40:21 41:5,6 | <b>asphalt</b> 12:20,22<br>13:14  |
| <b>\$6.3</b> 12:10  | <b>30-day</b> 19:16 20:1   | <b>abatement</b> 15:20  | <b>alternatives</b> 9:5<br>10:21 11:2,4,6,10,<br>12 12:14 13:21<br>14:16 15:22 16:18<br>18:2,6,7,9,21,22,<br>24 19:6,13 25:9<br>32:13 38:14,17<br>39:4 40:17,19 43:9<br>44:4                 | <b>assessed</b> 9:4   |
| <b>1</b>  | <b>35</b> 11:18  | <b>acceptable</b> 10:11<br>24:8   | <b>account</b> 38:12,14  | <b>assessment</b> 10:3,<br>4,13 24:3 28:15,18<br>42:22 43:12,19   |
| <b>1</b> 11:1 39:15 41:18<br>42:13,17   | <b>350-year</b> 40:1   | <b>acceptance</b> 17:24   | <b>access</b> 11:20 12:5<br>13:12 14:1,9,15<br>15:8,14,20 16:8,<br>12,15,22 17:1,5,9,<br>12 39:11  | <b>assessments</b><br>24:23 40:17 42:20   |
| <b>10</b> 21:9  | <b>3500-foot</b> 9:12  | <b>accurate</b> 22:9,10   | <b>action</b> 9:7,11<br>10:23 11:2,7 12:13<br>13:20 16:17 18:4,<br>8,11,13,16,18,20<br>19:10,22 33:18<br>41:4  | <b>AUDIENCE</b> 20:13<br>21:5,17 22:2,6,10,<br>13,18,22 23:3,7,<br>10,16,20   |
| <b>100</b> 39:14,18,20  | <b>4</b>   | <b>actions</b> 8:1 9:8  | <b>amount</b> 9:19   | <b>authorized</b> 39:23   |
| <b>12</b> 32:20 35:24   | <b>4</b> 14:6 16:13 18:12,<br>14,17  | <b>active</b> 28:10   | <b>Andria</b> 24:20,24<br>25:14 26:2,22<br>27:5,20 28:3,7,12,<br>24 29:4,7,11,17,23<br>30:2,12,18,22<br>31:6,9 33:18 34:4,<br>16 36:9,14 38:1  | <b>aware</b> 23:11,15,19<br>28:14 29:12,14<br>36:15   |
| <b>135</b> 9:14   | <b>401</b> 41:15   | <b>activities</b> 9:1   | <b>anomalies</b> 36:23   |   |
| <b>15</b> 21:9  | <b>5</b>   | <b>add</b> 26:14 31:20  | <b>answers</b> 6:5 38:6  |   |
| <b>150</b> 35:14  | <b>6</b>   | <b>addition</b> 6:7 11:6,<br>20 12:12 13:5,19<br>16:17,24 31:5<br>40:10 42:15 | <b>applicable</b> 17:18  |   |
| <b>17,000-tons</b> 8:2  | <b>6</b> 32:18 33:11   | <b>additional</b> 12:14<br>32:9 42:1  | <b>approach</b> 9:6<br>10:22   |   |
| <b>18</b> 33:13,14  | <b>64</b> 27:21 38:22  | <b>address</b> 26:12  | <b>approximately</b><br>9:13,18  |   |
| <b>1979</b> 7:18  | <b>6:38</b> 4:1  | <b>addressed</b> 33:24  | <b>apron</b> 17:3  |   |
| <b>1985</b> 7:23  | <b>7</b>   | <b>addressing</b> 31:23   | <b>aquatic</b> 43:15   |   |
| <b>1995</b> 8:1   | <b>7</b> 20:2  | <b>adjacent</b> 43:23   | <b>aquifer</b> 27:18   |   |
| <b>1999</b> 8:1   | <b>724</b> 11:19 12:4<br>13:22 14:12 15:6,<br>10 16:6,11,18<br>17:4,8 31:5 | <b>admits</b> 39:17   |  |   |
| <b>2</b>  | <b>7:55</b> 45:7   |   |  |   |
| <b>2</b> 4:7 5:2,23 6:13,<br>20 9:19 10:10,12<br>13:21 14:4,17 15:5<br>16:4 18:23 21:10<br>26:11 35:2,5,9,12<br>36:4 40:6 41:20<br>42:13,17 | <b>8</b>   |   |  |   |
| <b>2000</b> 8:4,8   | <b>8</b> 20:2  |   |  |   |
| <b>2002</b> 8:10  |  |   |  |   |
| <b>2007</b> 8:8   |  |   |  |   |
| <b>2008</b> 27:13   |  |   |  |   |
| <b>2009</b> 8:23  |  |   |  |   |

|  |   |  |   |   |
|--|---|--|---|---|
| <b>B</b>   | <b>call</b> 5:12,13 17:19                                     | <b>Chris</b> 31:13   | <b>complex</b> 44:12  | <b>containment</b> 27:4   |
| <b>back</b> 7:18 18:6<br>21:14 31:12 32:3<br>37:7        | <b>called</b> 9:9   | <b>circle</b> 16:6   | <b>compliance</b><br>17:17  | <b>contaminant</b><br>35:4,8  |
| <b>balancing</b> 17:19                                   | <b>calling</b> 25:1   | <b>circled</b> 15:13   | <b>compliant</b> 11:19<br>12:4 13:22 14:13<br>15:6,10 16:6,19<br>17:4,8 18:15 | <b>contaminants</b><br>7:11,15 9:20 10:9<br>21:20 27:19 33:20<br>35:1,18 39:5,7<br>41:10 42:19,24<br>43:10 44:5 |
| <b>bank</b> 9:9  | <b>cap</b> 11:8,9,11 12:8<br>14:5 30:14,23 31:8<br>32:22 37:4 | <b>clay</b> 7:21,22 33:7,<br>14,15,16 37:4   | <b>compounds</b> 7:12   | <b>contaminated</b><br>7:7 8:3, 9:18 11:15<br>14:22 20:18,23<br>29:10 31:23 35:6<br>43:3,22 44:9                |
| <b>Barrie</b> 6:10 24:4                                  | <b>capped</b> 11:18   | <b>clean</b> 4:6 5:3<br>19:14 40:19 44:18  | <b>comprehensive</b><br>26:17   | <b>contamination</b><br>7:5 9:2 32:4 35:10,<br>19 40:22,23,24<br>41:2 42:18 44:13,<br>18                        |
| <b>barrier</b> 8:14,15,21<br>9:12,13 42:1,15             | <b>capping</b> 15:24  | <b>cleanup</b> 43:9  | <b>computer</b> 30:10   | <b>continue</b> 39:16   |
| <b>bear</b> 42:18  | <b>caps</b> 12:16   | <b>cleanups</b> 44:1   | <b>concentration</b><br>35:11   | <b>contract</b> 24:13   |
| <b>bed</b> 9:14  | <b>capture</b> 8:18   | <b>climate</b> 38:14<br>39:18 41:8   | <b>concern</b> 25:20<br>42:7 43:6   | <b>contractor</b> 6:8,9   |
| <b>beginning</b> 7:18<br>19:22                           | <b>captured</b> 9:1 27:3<br>35:7                              | <b>climated</b> 40:2   | <b>Condifff</b> 6:8 33:3  | <b>control</b> 12:5   |
| <b>beneath</b> 36:3                                      | <b>captures</b> 9:17,19                                       | <b>closed</b> 7:2,8  | <b>condition</b> 38:13  | <b>controls</b> 8:22<br>11:20 13:3,12,18<br>14:1,2,10,15 15:8,<br>15,21 16:9,12,16,<br>22 17:1,5,9,12           |
| <b>Benezene</b> 35:16                                    | <b>capturing</b> 8:19   | <b>closer</b> 7:20 22:14   | <b>conjunction</b><br>38:20   | <b>coordinator</b> 20:8   |
| <b>benzene</b> 7:13                                      | <b>carnivores</b> 10:18                                       | <b>closest</b> 34:9  | <b>Conservancy</b><br>38:3  | <b>Corps</b> 27:11 38:20<br>39:9,16,17,22,<br>41:24 42:5,9,16   |
| <b>big</b> 4:20 35:9,21<br>36:2                          | <b>carried</b> 43:3   | <b>Club</b> 38:4   | <b>conservation</b><br>38:3   | <b>correct</b> 22:11  |
| <b>biphenyls</b> 7:14                                    | <b>carrying</b> 42:24   | <b>collect</b> 26:2,3,5<br>37:19   | <b>considerable</b><br>30:7   | <b>cost</b> 12:9 17:23<br>19:8 30:15 31:16<br>42:10 44:8  |
| <b>black</b> 12:18                                       | <b>Carson</b> 5:5   | <b>collecting</b> 13:7   | <b>considerate</b> 5:11   | <b>costs</b> 31:21 32:10<br>42:19   |
| <b>blue</b> 11:12 12:2,16<br>14:20 15:13,24<br>16:3 17:7 | <b>cases</b> 21:2   | <b>collection</b> 13:5   | <b>consideration</b><br>42:8  | <b>couple</b> 6:1,3<br>25:14,15 27:13<br>28:5 31:14   |
| <b>boils</b> 38:9  | <b>caused</b> 24:7 42:18<br>44:17                             | <b>color</b> 25:4,5  | <b>considered</b> 21:18<br>39:17 40:2,15                                      | <b>coupled</b> 40:7   |
| <b>bottom</b> 14:20 38:2<br>40:10                        | <b>central</b> 9:9 11:1<br>14:16,17 18:13,14,<br>23 35:12     | <b>comment</b> 4:8,13,<br>19,22 5:8,9,18 6:7<br>19:16,24 27:12,13<br>37:7,13,15 38:8<br>44:24 45:5 | <b>consisting</b> 7:21  | <b>court</b> 37:16  |
| <b>Bottoms</b> 9:16                                      | <b>CERCLA</b> 6:15  | <b>commenting</b> 43:7   | <b>consists</b> 6:20 7:1,<br>3 11:7 15:6                                      | <b>cover</b> 7:19,21<br>11:19 12:4,20,22,<br>24 13:14,16,22<br>14:7,13 15:6,11,18                               |
| <b>breach</b> 42:24 44:4                                 | <b>certification</b><br>39:15,21                              | <b>comments</b> 4:10,<br>14,18 5:12 19:15<br>20:7 27:14 37:19,<br>22 45:3                          | <b>construct</b> 7:19<br>41:24  |   |
| <b>break</b> 4:17 20:11<br>37:6,9                        | <b>CH2M</b> 6:9,10  | <b>commingling</b><br>32:5   | <b>constructed</b> 8:13,<br>16 42:15  |   |
| <b>breaking</b> 39:7                                     | <b>chair</b> 38:3   | <b>communication</b><br>42:5   | <b>construction</b><br>7:10 10:6 24:14<br>34:10                               |   |
| <b>bring</b> 39:2 41:21                                  | <b>change</b> 23:11<br>38:15 39:18 40:2<br>41:8 42:2          | <b>communities</b><br>43:4 44:15   | <b>consultant</b> 34:16   |   |
| <b>bringing</b> 38:21<br>43:22                           | <b>cheaper</b> 30:16,24                                       | <b>community</b> 4:23<br>17:24 20:7  | <b>contact</b> 4:23<br>34:10,12   |   |
| <b>brought</b> 41:2                                      | <b>chemicals</b> 24:10<br>25:20 26:1 43:13                    | <b>compactd</b><br>33:15,16  | <b>contained</b> 36:20  |   |
| <b>built</b> 40:12,13                                    | <b>chlorobenzene</b><br>35:3,12                               | <b>completed</b> 19:10,<br>11,20   |   |   |
| <b>C</b>   | <b>chlorobenzenes</b><br>7:13                                 |  |   |   |
| <b>Cahokia</b> 20:4<br>25:13 43:2                        | <b>choosing</b> 40:17   |  |   |   |

|   |  |   |  |   |
|---|--|---|--|---|
| 16:7,11,14,19,23<br>17:4,8,11 23:9<br>30:23 31:5 32:17,<br>21 33:12 34:13     | 19:21 41:24  | <b>DNAPL</b> 27:1   | <b>eliminate</b> 39:5  | <b>evening</b> 5:21                                     |
| <b>covered</b> 43:1   | <b>designating</b> 36:2  | <b>DNAPLS</b> 26:23<br>27:1,10 39:2   | <b>eliminating</b> 34:12   | <b>event</b> 39:19,20<br>40:15,23 41:1 44:3             |
| <b>covering</b> 41:9  | <b>designed</b> 15:18<br>16:14 38:10                                   | <b>documents</b> 20:3,<br>5   | <b>emanating</b> 35:19   | <b>excavated</b> 37:1                                   |
| <b>covers</b> 9:11 11:23<br>12:16 13:8,10<br>15:24 24:9 32:20,<br>23          | <b>details</b> 4:6 24:19   | <b>dog</b> 13:23  | <b>embankment</b><br>7:24  | <b>exceed</b> 24:8                                      |
| <b>criteria</b> 17:15,19,<br>23 18:4,5,9,10,11,<br>14,17,18,20 40:18<br>41:12 | <b>determination</b><br>40:3   | <b>dollars</b> 31:16  | <b>emergency</b> 27:16   | <b>Excuse</b> 30:1                                      |
| <b>criticisms</b> 4:14  | <b>determine</b> 9:5<br>39:18 42:21                                    | <b>downstream</b> 43:4<br>44:16   | <b>end</b> 4:12  | <b>expected</b> 39:21                                   |
| <b>crucial</b> 39:8   | <b>determined</b> 43:8   | <b>drainage</b> 30:14   | <b>endanger</b> 44:2   | <b>expecting</b> 30:7,9                                 |
| <b>crushed</b> 7:9 14:13<br>15:6 16:7,11 32:20                                | <b>determining</b><br>10:21  | <b>driving</b> 25:20 26:1   | <b>ended</b> 45:5  | <b>explain</b> 5:3 20:13                                |
| <b>current</b> 10:16 33:2   | <b>developed</b> 13:13   | <b>dropping</b> 21:8  | <b>enforce</b> 42:14   | <b>expose</b> 43:1                                      |
| <hr/>   | <b>development</b><br>39:16 40:4                                       | <b>drum</b> 9:10 29:7,<br>14,20   | <b>engaged</b> 43:18   | <b>exposed</b> 42:21                                    |
| <b>D</b>  | <b>devoid</b> 35:18  | <b>drums</b> 7:10 8:3<br>10:2 16:5,11 28:24<br>29:3,5,13,16,21<br>36:11,16,19,21,24<br>37:1 | <b>Engineers</b> 38:21   | <b>exposure</b> 34:13<br>39:5 43:13                     |
| <b>damage</b> 28:8 43:6   | <b>diagrams</b> 25:4   | <b>due</b> 40:14 43:20  | <b>enhancement</b><br>21:18  | <b>exposures</b> 10:7                                   |
| <b>damages</b> 21:24<br>22:1 28:11,16   | <b>difficult</b> 44:13   | <b>dug</b> 36:23  | <b>ensure</b> 42:9   | <b>extensive</b> 8:9                                    |
| <hr/>   | <b>dioxin</b> 23:21<br>24:10,21  | <hr/>   | <b>entire</b> 16:19,21,24<br>17:4,8,11 31:5<br>34:2  | <b>extent</b> 9:2 11:11,<br>23 14:7                     |
| <b>dash</b> 15:4  | <b>dioxins</b> 7:14<br>10:10,19 23:22<br>24:1,5,22 25:21               | <b>E</b>  | <b>environment</b><br>17:17 19:1 21:22<br>34:14 44:2   | <b>extraction</b> 15:12<br>31:4                         |
| <b>data</b> 9:4   | <b>direct</b> 24:12 34:10,<br>12                                       | <b>e-mail</b> 45:3  | <b>Environmental</b><br>4:24   | <hr/>   |
| <b>date</b> 9:5 28:19   | <b>directed</b> 44:8   | <b>early</b> 9:7 19:10  | <b>EPA</b> 4:13 5:4,6,22<br>6:11 7:19 8:1,4,12,<br>10:23 19:16 20:6<br>25:13 26:20 27:12,<br>13 41:14 42:6 | <b>facility</b> 6:18 9:16                               |
| <b>Dave</b> 22:2  | <b>directing</b> 26:8  | <b>earthquake</b> 40:13<br>41:1   | <b>EPA'S</b> 4:5,15 5:1,<br>3 6:4,8 10:11<br>18:22 24:8 45:2   | <b>fact</b> 45:1,2                                      |
| <b>deal</b> 32:10   | <b>direction</b> 20:14   | <b>earthquakes</b><br>40:16   | <b>equation</b> 39:18  | <b>fail</b> 41:5  |
| <b>dealing</b> 42:19  | <b>discharged</b> 9:17   | <b>East</b> 38:10 39:1  | <b>erosion</b> 15:9  | <b>failure</b> 40:16                                    |
| <b>dealt</b> 31:18  | <b>discuss</b> 6:4 28:18   | <b>eastern</b> 22:7   | <b>estimated</b> 19:8,23<br>34:11  | <b>fairly</b> 21:3                                      |
| <b>debris</b> 7:10  | <b>discussions</b><br>41:23  | <b>echo</b> 44:17   | <b>estimates</b> 24:7  | <b>fast</b> 19:9  |
| <b>decision</b> 19:18<br>24:11 37:20 38:5                                     | <b>disposal</b> 7:1,4,8,<br>9,22 8:16 9:22<br>29:7,8,9,13,14,20,<br>21 | <b>ecological</b> 10:13,<br>14,16 16:4 21:17<br>43:11,15,19                                 | <b>evaluate</b> 43:20  | <b>fax</b> 20:9   |
| <b>decisions</b> 25:20<br>44:14   | <b>disposed</b> 8:4<br>29:16   | <b>edge</b> 22:7  | <b>evaluated</b> 10:4,6,<br>14 11:2 12:12<br>13:20 18:3 24:2<br>34:3 43:12                                 | <b>feasibility</b> 8:6 9:3<br>19:12 25:10 36:6          |
| <b>deep</b> 27:21,22<br>28:2 38:22  | <b>district</b> 27:7 39:14   | <b>effect</b> 21:15 41:20   | <b>evaluation</b> 40:18<br>41:12   | <b>federal</b> 19:2 28:20<br>43:18                      |
| <b>defined</b> 26:24  | <b>district's</b> 38:19  | <b>effectiveness</b><br>17:20,22 19:5<br>40:20 41:12  |  | <b>feet</b> 7:22 9:14 21:9<br>27:21 32:18 37:4<br>38:22 |
| <b>dense</b> 9:24   | <b>districts</b> 41:15<br>42:13  | <b>effects</b> 43:12  |  | <b>FEMA</b> 39:15,21                                    |
| <b>describe</b> 11:8  |  | <b>efforts</b> 39:6 44:21   |  | <b>field</b> 8:7,24                                     |
| <b>design</b> 12:8 13:16  |  |   |  | <b>fills</b> 7:19                                       |
|   |  |   |  | <b>final</b> 19:18                                      |
|   |  |   |  | <b>finalized</b> 8:23 9:3                               |

|  |   |  |   |
|--|---|--|---|
| <b>finding</b> 29:5  | <b>gradients</b> 36:3   | <b>herbivores</b> 10:18  | <b>implementable</b> 9:11                                     |
| <b>fish</b> 10:8 43:12,17, 20 44:16                          | <b>granted</b> 41:14  | <b>high</b> 21:11  | <b>interior</b> 40:5  |
| <b>fishers</b> 10:5  | <b>grave</b> 44:15  | <b>higher</b> 21:12 38:16 40:8   | <b>internally</b> 36:18                                       |
| <b>flood</b> 27:6 38:19 39:13 42:24 43:3                     | <b>gravel</b> 32:20   | <b>highlighted</b> 14:19   | <b>introductions</b> 4:22 6:3                                 |
| <b>flooding</b> 27:16 40:5                                   | <b>green</b> 6:17 12:2 16:1,6   | <b>Hill</b> 6:9,10   | <b>intrusion</b> 13:2,17, 24 14:9,14                          |
| <b>floodplain</b> 33:21 34:5,7 39:17 40:4 41:6,7, 43:11 44:5 | <b>grossly</b> 35:15  | <b>history</b> 7:6   | <b>investigate</b> 26:15                                      |
| <b>focus</b> 8:17 21:22                                      | <b>ground</b> 5:7 32:17   | <b>horrific</b> 44:13  | <b>investigated</b> 27:5,8 36:17                              |
| <b>form</b> 45:1   | <b>groundwater</b> 8:12,17,18,19,21 9:24 10:8 26:2,4,9, 10,11,12,15,16 27:2,4,7 29:23 30:2 31:18,22,24 32:4,6,7,14 34:17 35:8 39:7,11 41:16 42:3 43:21,22 | <b>huge</b> 24:20  | <b>investigation</b> 8:6, 8,9,24 9:21 19:11 29:15 33:23 36:21 |
| <b>formal</b> 37:7,12  | <b>group</b> 4:20 28:10, 15 37:24 38:4  | <b>human</b> 10:3 17:16 19:1 21:22   | <b>investigations</b> 8:10                                    |
| <b>formally</b> 4:8  | <b>groups</b> 38:4  | <b>humans</b> 39:6   | <b>involvement</b> 20:8                                       |
| <b>forward</b> 4:4 19:9 28:17 43:7                           | <b>guess</b> 34:23  | <b>hundred</b> 14:24 20:19,23 35:15  | <b>isolated</b> 35:11   |
| <b>found</b> 37:1  | <b>guys</b> 14:18   | <b>hydrologic</b> 26:18  | <b>issue</b> 4:16 32:10 36:20                                 |
| <b>FPDC</b> 41:15 42:16                                      | <hr/> <b>H</b> <hr/>  | <b>hypothetically</b> 24:15  | <b>issued</b> 8:5,12  |
| <b>fresh</b> 27:15   |   | <hr/> <b>I</b> <hr/>   | <b>issues</b> 31:17   |
| <b>Friday</b> 20:1   |   | <b>IAC</b> 11:18   | <hr/> <b>J</b> <hr/>  |
| <b>FS</b> 33:3,4   |   | <b>idea</b> 6:22   | <b>J-u-m-p</b> 22:3   |
| <b>full</b> 12:8 33:24                                       | <b>hand</b> 5:14 37:22  | <b>identical</b> 14:3  | <b>July</b> 20:2 45:4   |
| <b>fully</b> 25:11   | <b>hard</b> 15:5 44:11  | <b>identified</b> 9:22,23 10:2,12,18 11:16 12:1,2 13:5,6 14:8, 22 15:3,7,11,17,19 16:2,3,6,7,11,20 25:5 27:1 29:15,16 32:1 43:16 | <b>Jump</b> 22:2 32:16, 24 33:6,10,15,17                      |
| <b>funded</b> 42:17  | <b>hazard</b> 25:17,18  | <b>identifying</b> 10:22 25:2 33:23  | <b>June</b> 20:2  |
| <b>funding</b> 39:23   | <b>hazardous</b> 12:8 14:5  | <b>Illinois</b> 5:4,5 6:11 7:19,23 11:18 14:23 19:7 27:12 38:19 39:13 41:14  | <hr/> <b>K</b> <hr/>  |
| <b>furans</b> 10:19  | <b>head</b> 30:5  | <b>images</b> 6:1  | <b>Kaskaskia</b> 38:3   |
| <b>future</b> 28:19 39:11                                    | <b>health</b> 10:3 17:16 19:1 21:22 34:14 42:22   | <b>impact</b> 40:5   | <b>Kathy</b> 38:1   |
| <hr/> <b>G</b> <hr/>   | <b>hear</b> 19:15   | <b>impacted</b> 38:5   | <b>kind</b> 9:1,4 23:1,3 33:6                                 |
| <b>GCMS</b> 35:7   | <b>heard</b> 23:14  | <b>impacts</b> 21:19 38:16 41:8,19 44:15   | <b>Krause</b> 4:3,23 20:7 37:6,12 44:23                       |
| <b>general</b> 6:13  | <b>hearing</b> 4:5,10 27:6 37:13 41:18, 22  | <b>implementability</b> 17:22  | <b>Krummrich</b> 6:18 36:4                                    |
| <b>gentleman</b> 31:12                                       | <b>heavily</b> 11:14 14:22,23   |  | <hr/> <b>L</b> <hr/>  |
| <b>give</b> 19:12  | <b>heavy</b> 25:16 29:10  |  | <b>lagoons</b> 7:3  |
| <b>giving</b> 6:16 23:21                                     | <b>helpful</b> 25:6   |  |   |
| <b>GMCS</b> 8:22   |   |  |   |
| <b>Good</b> 5:21   |   |  |   |
| <b>gradient</b> 21:13,14 36:1                                |   |  |   |

|   |  |   |   |   |
|---|--|---|---|---|
| <b>Lake</b> 5:4 6:11<br>27:24 28:14 31:2  | 13 29:2,8,12,19<br>30:1,4,17,20 31:1,<br>3,8,10,19,22<br>32:11,19 33:1,4,8,<br>11,14,16,22 34:6,<br>20 36:5,13,15 37:3 | <b>mailings</b> 24:17   | <b>micrograms</b><br>35:14  | <b>needed</b> 31:17<br>34:3   |
| <b>landfill</b> 13:9  |  | <b>main</b> 7:14 8:16<br>10:9 21:22 24:10<br>35:3                         | <b>microphone</b> 5:13  | <b>negates</b> 39:3,12  |
| <b>landfills</b> 7:2 43:1   |  | <b>major</b> 40:14  | <b>middle</b> 27:24   | <b>neighboring</b> 6:14   |
| <b>landward</b> 40:7  |  | <b>make</b> 4:8,18,22<br>5:17 44:14,24                                    | <b>migration</b> 8:22<br>27:4   | <b>net</b> 21:15  |
| <b>large</b> 35:3   | <b>lingo</b> 24:23   | <b>makes</b> 34:13  | <b>million</b> 12:10,11<br>19:9 30:13   | <b>non-aqueous</b><br>9:24  |
| <b>laterally</b> 20:16  | <b>link</b> 45:1   | <b>making</b> 5:11 7:17   | <b>minimize</b> 30:24   | <b>north</b> 6:15 11:1<br>13:19,21,23 14:3,<br>6,7,11 18:10,12,23<br>25:24 27:1,3 |
| <b>leach</b> 15:1 20:24<br>21:3   | <b>liquefaction</b><br>40:12   | <b>managed</b> 40:22,<br>23 41:1,3  | <b>minimizes</b> 30:15  | <b>NRD</b> 21:23  |
| <b>leachable</b> 11:17  | <b>liquid</b> 9:24 25:1  | <b>manager</b> 5:1,22   | <b>minute</b> 30:11   | <b>number</b> 30:7<br>31:16 38:24 40:18   |
| <b>leachate</b> 10:7  | <b>liquids</b> 11:16   | <b>map</b> 9:11 11:8  | <b>miscellaneous</b><br>7:11  | <hr/> <b>O</b> <hr/>  |
| <b>leached</b> 21:1   | <b>Lisa</b> 6:8  | <b>maps</b> 26:17 30:10<br>34:23 35:22,23<br>36:5                         | <b>Mississippi</b> 6:23<br>10:15 38:12 43:14,<br>16                                   |   |
| <b>leaching</b> 20:20<br>21:4   | <b>list</b> 28:23 41:4,5   | <b>March</b> 32:3   | <b>mitigation</b> 13:2,<br>11,17,24 14:9,14,<br>15 21:19                              | <b>O1</b> 10:24   |
| <b>leakable</b> 12:1 21:4   | <b>listed</b> 23:22,24<br>34:19  | <b>Mary</b> 37:16   | <b>mobile</b> 11:13<br>12:18,22 13:15<br>14:21 15:14 16:1,<br>20 17:6 20:14,17,<br>20 | <b>O2</b> 11:7,10,17<br>18:23   |
| <b>leave</b> 24:21 36:12  | <b>liter</b> 35:14   | <b>mass</b> 12:5 34:1,2<br>35:8   | <b>mobility</b> 17:21<br>19:4   | <b>O4</b> 11:10 12:6  |
| <b>leechate</b> 25:22   | <b>living</b> 44:16  | <b>material</b> 25:22<br>34:15  | <b>modified</b> 17:23   | <b>obtained</b> 9:4   |
| <b>left</b> 36:16   | <b>local</b> 21:17   | <b>materials</b> 25:16<br>26:6  | <b>monitoring</b> 21:1  | <b>occasionally</b><br>21:14  |
| <b>leg</b> 13:23  | <b>locate</b> 36:21  | <b>matter</b> 38:6  | <b>Monsanto</b> 7:23  | <b>occurred</b> 8:21  |
| <b>levee</b> 27:15 38:10,<br>13 39:9 40:7,9,16,<br>24 41:2,15 42:13,<br>23 43:20 44:3,4,6,<br>19  | <b>long</b> 19:5 21:15<br>23:16 28:21 40:19,<br>21 41:12 44:11   | <b>meet</b> 18:5,7,8,9,<br>11,12,14,16,18,20<br>19:2                      | <b>move</b> 20:15,16  | <b>occurring</b> 21:4   |
| <b>levees</b> 38:17,20<br>39:14,23 40:9,12<br>41:8  | <b>longterm</b> 17:20  | <b>meeting</b> 28:17,22   | <b>municipal</b> 7:7  | <b>office</b> 20:6 25:13<br>26:21   |
| <b>level</b> 21:5,8,9,11<br>39:23 40:1  | <b>looked</b> 10:21 11:6,<br>24 12:3,14 13:22<br>14:17 16:18 17:3,<br>14   | <b>MEMBER</b> 20:13<br>21:5,17 22:2,6,10,<br>13,18,22 23:3,7,<br>10,16,20 | <hr/> <b>N</b> <hr/>  | <b>official</b> 20:12 38:8  |
| <b>levels</b> 10:11 24:8<br>38:16 40:8  | <b>lot</b> 7:16 12:19,23<br>13:15 30:8 36:20   | <b>members</b> 38:4   |   | <b>offsite</b> 8:4  |
| <b>library</b> 20:4 25:13<br>26:20 36:7   | <b>Louis</b> 38:11 39:1  | <b>mention</b> 24:22<br>25:19   |   | <b>oil</b> 25:16  |
| <b>light</b> 16:3   | <b>low</b> 21:9  | <b>mentioned</b> 5:21<br>9:7 12:17 23:20<br>26:7,22 27:6 31:16<br>36:6    |   | <b>oils</b> 27:20   |
| <b>limit</b> 14:24  | <b>lower</b> 27:19   | <b>metals</b> 25:17   |   | <b>oily</b> 25:1  |
| <b>limits</b> 5:10 20:19,<br>24   | <b>Lowered</b> 43:14   | <b>Metro</b> 38:10  |   | <b>online</b> 20:3 36:7   |
|   | <hr/> <b>M</b> <hr/>   | <b>Michelle</b> 5:4   |   | <b>open</b> 20:12 21:3  |
| <b>Linebaugh</b> 5:1,<br>20,22 20:17 21:7,<br>21 22:8,11,16,20<br>23:1,6,8,14,19<br>24:1,12,16,22<br>25:8,23 26:7,19,24<br>27:11,23 28:1,5,9, | <b>made</b> 24:11 44:18  |   |   | <b>operable</b> 8:11<br>26:13   |
|   | <b>Madrid</b> 40:11,14   |   |   | <b>opportunity</b> 4:8<br>6:6   |
|   | <b>magnetic</b> 36:23  |   |   | <b>orange</b> 6:15 15:2,<br>3,4   |
|   | <b>mailed</b> 20:9   |   |   | <b>order</b> 8:5  |
|   | <b>mailing</b> 28:23   |   |   |   |

|   |  |   |   |
|---|--|---|---|
| <b>organic</b> 7:12   | <b>people</b> 4:20 24:24<br>26:6 42:21 43:14<br>44:2,10,15   | <b>portions</b> 10:1<br>26:7,8 27:12<br>31:15,23 32:3<br>38:24 39:4   | 16 38:6   |
| <b>organisms</b> 43:15  |  | <b>positives</b> 11:3   | <b>quickly</b> 11:8   |
| <b>organization</b> 5:17  | <b>percent</b> 9:18 35:7,<br>10 39:15  | <b>potential</b> 10:7,11,<br>14,17 11:13,24<br>12:18,22 14:21<br>15:1,13 16:1,4,20<br>17:6 20:14,17,20,<br>24 34:10 39:2<br>40:15 42:22,23<br>43:12 | <b>Quoting</b> 43:11  |
| <b>OU2</b> 9:11 12:6  | <b>perform</b> 8:6   |   |   |
| <b>outline</b> 6:17 11:9<br>12:16 15:4 17:7   | <b>performance</b><br>17:20  | <b>protect</b> 38:10  | <b>R</b>  |
| <b>outlined</b> 6:13<br>11:12 13:24   | <b>performed</b> 42:23   | <b>protecting</b> 21:21<br>40:9   | <b>R1</b> 11:1  |
| <b>overpass</b> 23:12   | <b>period</b> 4:13 19:16<br>20:1 37:8 38:7<br>45:5   | <b>protection</b> 4:24<br>15:9,12,19 17:16<br>34:14 39:24   | <b>R2</b> 16:18 18:24   |
| <b>oversight</b> 6:9  | <b>permanence</b><br>40:20 41:13   | <b>protective</b> 19:1<br>30:23   | <b>R3</b> 16:22 18:19   |
| <b>overview</b> 6:12,21<br>7:5 10:3,20  | <b>permanent</b> 44:1  | <b>provide</b> 19:5   | <b>rail</b> 23:4,12   |
| <b>P</b>  | <b>permit</b> 41:15  | <b>PRPS</b> 42:12,17<br>44:7  | <b>rainfall</b> 38:15   |
| <b>p.m.</b> 4:1 45:7  | <b>person</b> 4:21   | <b>public</b> 4:10,11,17<br>5:7 19:24 20:4,7<br>28:17,21 37:12,19,<br>21 41:18 45:4   | <b>raise</b> 5:14 37:22   |
| <b>P1</b> 10:24   | <b>phase</b> 9:24 19:11  | <b>published</b> 34:24  | <b>RCRA</b> 6:17 12:8<br>13:15 14:4,6 15:17<br>16:14,23 17:10<br>31:8 37:20 |
| <b>P2</b> 12:21 13:3  | <b>Phil</b> 6:9 20:21 33:2<br>34:20 36:5   | <b>pump</b> 9:14 27:7,18<br>41:16 42:2  | <b>re-visit</b> 28:7  |
| <b>P3</b> 13:4,14 18:23   | <b>photo</b> 12:3  | <b>pumped</b> 9:15  | <b>reading</b> 24:24  |
| <b>P4</b> 13:13   | <b>physically</b> 35:23  | <b>pumping</b> 38:22<br>39:12 43:21 44:3,7  | <b>realize</b> 38:18  |
| <b>paid</b> 42:12   | <b>pictures</b> 25:12  | <b>purely</b> 21:19   | <b>reason</b> 43:10   |
| <b>pallid</b> 43:18   | <b>place</b> 11:21 33:10<br>39:5 41:10   | <b>put</b> 7:21,24 11:21<br>23:8,11 26:5 27:15<br>40:9 44:20  | <b>reasons</b> 18:1   |
| <b>parking</b> 12:19,23<br>13:15  | <b>plan</b> 4:6 5:3,24 6:4<br>19:13 24:18 25:10<br>26:8 27:14 28:16,<br>18,19 31:15,23<br>32:3 38:19 39:14<br>44:7 | <b>puts</b> 30:13   | <b>recall</b> 29:5 30:6,8<br>35:13,21 37:2                                  |
| <b>part</b> 8:8,20 13:23<br>15:3 17:13 19:17<br>28:14 32:12 36:6<br>37:19 39:9 42:8 | <b>planning</b> 22:14,18   | <b>putting</b> 30:22  | <b>recently</b> 6:16  |
| <b>Partial</b> 44:1   | <b>plans</b> 27:7 39:4<br>42:2 44:21   | <b>Q</b>  | <b>receptors</b> 24:7   |
| <b>parties</b> 8:5  | <b>plant</b> 16:2  | <b>Q5</b> 14:11   | <b>recommended</b><br>4:6 18:22   |
| <b>past</b> 9:3   | <b>players</b> 35:21   | <b>QC3</b> 15:10  | <b>record</b> 4:1 19:17<br>45:7   |
| <b>Pat</b> 5:21   | <b>plume</b> 26:16 34:23<br>35:22  | <b>QC4</b> 15:16  | <b>recreational</b> 10:5  |
| <b>pathway</b> 34:13  | <b>plumes</b> 35:3,16<br>36:2  | <b>QS3</b> 23:8   | <b>red</b> 6:14   |
| <b>Patricia</b> 4:22  | <b>point</b> 15:22   | <b>quantified</b> 28:8  | <b>reduce</b> 19:3  |
| <b>Patty</b> 20:7   | <b>ponds</b> 23:2  | <b>question</b> 4:9 22:3<br>30:20 31:11 38:7  | <b>reduction</b> 17:20  |
| <b>Paul</b> 5:4 6:10<br>28:13   | <b>populations</b><br>43:17  | <b>questions</b> 4:10,17<br>6:5,6 20:10,11<br>25:15 31:14 37:5,   | <b>reference</b> 6:1  |
| <b>pay</b> 44:8,18  |  |   | <b>referenced</b> 8:22<br>45:2  |
| <b>PCB</b> 7:13 8:3   |  |   | <b>region</b> 20:6 26:11  |
| <b>PCBS</b> 10:10<br>25:16,21,22  |  |   | <b>regional</b> 26:10<br>32:7   |
|   |  |   | <b>regionally</b> 26:12   |
|   |  |   | <b>register</b> 28:20   |

|  |  |  |  |   |
|--|--|--|--|---|
| <b>regularly</b> 21:2  | <b>requirements</b> 17:18  | <b>ROD</b> 8:11  | <b>semi-volatiles</b> 7:12   | 25:15,18,23,24<br>26:1,3,4,23,24<br>27:9 28:24 29:1,2,<br>3,17,22 30:3,16,<br>17,18 31:5,9 32:1,<br>19,21 33:9 35:5,6,<br>18 36:1,10,14,17<br>37:2,4 41:7 44:12                     |
| <b>regulations</b> 19:2  | <b>residents</b> 43:2  | <b>rules</b> 5:7   | <b>send</b> 20:6   | <b>sites</b> 6:20 7:17 9:6<br>10:10,12,15,24<br>12:15 18:3 21:6<br>23:23 24:6,9 25:15<br>26:5,15,23 27:10<br>32:3,5, 34:8,18,22<br>35:2,5,9 36:21,22<br>39:11 40:6 41:4,20<br>44:12 |
| <b>relate</b> 27:9   | <b>resource</b> 21:23<br>22:1 28:10,16   | <b>run</b> 20:2  | <b>separate</b> 26:13  | <b>size</b> 17:3  |
| <b>related</b> 30:23<br>31:18                                    | <b>resources</b> 28:8,<br>10 43:7  | <b>Ryan</b> 5:4  | <b>set</b> 28:19   | <b>sludge</b> 7:3   |
| <b>releasing</b> 43:23   | <b>respond</b> 37:20   | <b>S</b>   | <b>severe</b> 40:10,12   | <b>smaller</b> 17:2   |
| <b>relevant</b> 4:15<br>17:18                                    | <b>responding</b> 4:12   | <b>S1</b> 11:1   | <b>shaded</b> 11:11<br>14:19 15:7,17   | <b>Smith</b> 6:9 20:22<br>21:13 26:14 29:5,9<br>30:6 33:13 34:22<br>36:17   |
| <b>relief</b> 27:15,17<br>38:21,24 41:3,16<br>42:11 43:21 44:3,6 | <b>response</b> 4:15   | <b>S2</b> 17:3   | <b>shallow</b> 27:18   | <b>snow</b> 38:15   |
| <b>remainder</b> 12:4  | <b>responsible</b> 8:5   | <b>S3</b> 17:6 18:24   | <b>shaped</b> 22:4   | <b>soil</b> 9:10 10:7,<br>11:19,24 14:22<br>15:12 17:4 20:18,<br>22 21:3,4 25:21,22<br>26:8 29:10 30:23<br>31:4,7 32:4,22,24<br>33:6,10,11,12                                       |
| <b>remaining</b> 40:22   | <b>responsive</b> 19:17<br>37:21   | <b>S4</b> 17:10 30:13  | <b>share</b> 4:5 5:16  | <b>soils</b> 7:7 8:3<br>11:15,17 24:6<br>31:24  |
| <b>remarkably</b> 35:18  | <b>restoration</b> 21:18   | <b>safeguards</b> 44:20  | <b>she'll</b> 37:17  | <b>solid</b> 13:9 32:22   |
| <b>remedial</b> 8:6,7,23<br>9:21 19:11,21,22                     | <b>restrict</b> 39:10  | <b>safely</b> 40:22  | <b>sheet</b> 20:9 45:1,3   | <b>sort</b> 22:13,23<br>23:17   |
| <b>remediation</b> 31:15,21                                      | <b>restriction</b> 39:12   | <b>samples</b> 26:3,4<br>29:23 30:2 34:18  | <b>shoreline</b> 15:11,<br>19  | <b>source</b> 9:23 11:13<br>12:1,18,22 13:15<br>14:21 15:14 16:1,<br>20 17:7 20:14,17<br>26:9 31:24 32:4  |
| <b>remedies</b> 19:13<br>32:6                                    | <b>resulting</b> 38:16   | <b>sand</b> 7:19 38:9<br>40:13   | <b>short</b> 4:17 17:22<br>19:5 37:6   | <b>sources</b> 9:20   |
| <b>remedy</b> 8:13,17<br>10:22 17:14 19:8,<br>19 26:10 32:7,13   | <b>resumes</b> 37:11   | <b>satisfy</b> 41:11   | <b>show</b> 23:10 29:24<br>30:3,7  | <b>south</b> 9:8,9 10:2,<br>19 11:1 15:22<br>16:4,10,13 18:15,<br>17,24 22:20 26:1  |
| <b>remedying</b> 9:6   | <b>reverse</b> 21:13   | <b>Sauget</b> 4:7 5:1,23<br>6:13,15 10:10,12<br>18:23 39:1 40:6<br>41:17,18,20 42:12,<br>16 43:2 | <b>showed</b> 30:8   |   |
| <b>remember</b> 23:22<br>35:19 36:10                             | <b>review</b> 19:24 20:3   | <b>Sauget/cahokia/<br/>east</b> 38:11  | <b>showing</b> 22:23   |   |
| <b>removal</b> 8:1 9:8,<br>10 16:5,10 44:5                       | <b>revised</b> 27:14   | <b>scheduled</b> 19:19   | <b>shows</b> 11:9  |   |
| <b>remove</b> 34:15<br>41:5 43:10                                | <b>revisions</b> 28:6  | <b>scientists</b> 39:19<br>40:14   | <b>side</b> 23:4 34:9<br>40:7,8  |   |
| <b>removed</b> 8:2,4<br>29:1 36:11 37:1                          | <b>RI</b> 26:16,19 36:8  | <b>scouring</b> 43:1   | <b>Sierra</b> 38:4   |   |
| <b>removes</b> 33:20   | <b>riprap</b> 7:24   | <b>section</b> 38:8  | <b>sign</b> 4:20   |   |
| <b>removing</b> 34:2<br>41:10                                    | <b>rising</b> 21:7   | <b>sediment</b> 43:16  | <b>significant</b> 4:14<br>9:19  |   |
| <b>renew</b> 42:7 43:6   | <b>risk</b> 10:3,4,13<br>16:4,7 24:2,7,23<br>26:1 33:24 34:1,7,<br>8,9,12,13 40:10,<br>12,16 42:20,22<br>43:11,14,19,20                    | <b>sediments</b> 10:8,<br>17   | <b>similar</b> 11:22 12:6<br>14:11   |   |
| <b>repair</b> 38:19<br>39:14,23 41:3<br>44:19                    | <b>risks</b> 10:11,14,16,<br>17 42:22 43:17  | <b>seismic</b> 40:11   | <b>simplified</b> 24:16  |   |
| <b>report</b> 8:24 26:16   | <b>river</b> 6:23 7:20,24<br>9:9,17 10:15 15:9,<br>12,20 21:5,8,10,16<br>22:7,14 23:4 34:9<br>38:12,16,23 40:8<br>41:17,21 43:14,17,<br>23 | <b>Selco</b> 6:10  | <b>site</b> 4:7 5:2,23,24<br>6:13,15,16,20,22,<br>24 7:3,4,6,20,22<br>8:2,10,14,19,20<br>9:2,13,20 10:1,2,<br>18,19,23 11:4,5<br>12:12,23 13:6,19,<br>21 14:16 15:5,16,<br>22 16:17,19,21,24<br>17:2,8,9,11,14<br>18:4,8,10,13,17,<br>19,23 19:14,19<br>20:4,6 21:10,24<br>22:4,20 23:10 |   |
| <b>reporter</b> 37:17  | <b>Robert</b> 5:5  | <b>selecting</b> 32:13<br>43:9   |  |   |
| <b>repository</b> 26:21  | <b>rock</b> 9:14 14:13<br>15:6 16:7,11<br>32:17,18   | <b>selection</b> 17:14<br>19:19  |  |   |
| <b>requested</b> 42:5  |  |  |  |   |



|  |  |  |  |   |
|--|--|--|--|---|
| 29:16 35:17 36:13,<br>24                 | <b>subsurface</b> 25:22                                      | <b>things</b> 22:23                                | <b>unit</b> 8:11 26:13,18<br>35:23   | <b>website</b> 20:3 25:6,<br>11,12 26:20  |
| <b>Southwestern</b><br>38:18 39:13       | <b>subtitle</b> 12:8<br>13:16 14:4,7 15:18<br>16:14,23 17:11 | <b>threshold</b> 17:15<br>18:10,11,14,16,18,<br>20 | <b>untreated</b> 38:23<br>41:16 42:3 43:23   | <b>wells</b> 21:2 27:15,<br>17 38:22,24 41:3,<br>16 42:3,11 43:21   |
| <b>span</b> 9:13                         | <b>suggested</b> 21:3<br>39:19                               | <b>time</b> 4:11,12 5:9,<br>10 28:3                | <b>upgrade</b> 9:20  | <b>wetlands</b> 38:23<br>43:24  |
| <b>spanned</b> 8:8                       | <b>summarized</b> 8:24                                       | <b>times</b> 14:24 20:19,<br>23                    | <b>urge</b> 41:9   | <b>wildlife</b> 39:6<br>43:13,20 44:2,16  |
| <b>speak</b> 5:14 12:20                  | <b>summary</b> 10:4,13<br>19:17 37:21                        | <b>tissue</b> 10:9                                 | <b>utility</b> 10:6 34:11  | <b>withstand</b> 40:13  |
| <b>speaker</b> 5:9                       | <b>superfund</b> 4:7<br>40:19 41:11,17                       | <b>today</b> 19:12                                 | <b>utilized</b> 27:16  | <b>work</b> 4:21,23 7:16<br>8:7 23:11 40:21<br>41:24 44:21  |
| <b>speaking</b> 12:21                    | <b>supplemental</b><br>8:10                                  | <b>tonight</b> 4:4 18:1<br>19:15                   | <b>v</b>   | <b>worked</b> 44:11   |
| <b>specific</b> 9:12                     | <b>supplies</b> 43:5   | <b>top</b> 23:17 30:4<br>33:12,19                  | <b>vapor</b> 13:1,10,11,<br>17,24 14:8,14<br>15:12 31:4,7  | <b>workers</b> 10:5,6<br>24:15 34:11  |
| <b>specifically</b> 30:9<br>35:13 36:22  | <b>supported</b> 19:6  | <b>total</b> 19:8 33:1                             | <b>variety</b> 6:23 7:6,9,<br>11   | <b>working</b> 28:15  |
| <b>spell</b> 5:15 37:14,<br>23           | <b>supposed</b> 28:20  | <b>totally</b> 39:3                                | <b>variously</b> 39:24   | <b>written</b> 4:13   |
| <b>square</b> 12:19                      | <b>surface</b> 10:8,17<br>25:21 30:14 39:3,8<br>41:2 43:22   | <b>toxic</b> 43:2                                  | <b>VOCS</b> 30:7   | <b>y</b>  |
| <b>St</b> 38:11 39:1                     | <b>surprised</b> 36:19                                       | <b>toxicity</b> 17:21<br>19:4                      | <b>volatiles</b> 7:12  | <b>year</b> 19:24 39:15,<br>19,20   |
| <b>standard</b> 35:14                    | <b>system</b> 9:15 27:4<br>38:10 44:17                       | <b>track</b> 23:4,12                               | <b>volume</b> 17:21<br>19:4  | <b>years</b> 7:18 19:23<br>27:13 28:6 39:22   |
| <b>standpoint</b> 21:20                  | <b>T</b>   | <b>transcriber</b> 4:9<br>5:16 37:17               | <b>vulnerability</b> 41:7  | <b>yellow</b> 11:11,18,<br>19 12:15,24 13:8,<br>16,22,24 14:5,12,<br>13,18,19 15:8,17,<br>23 16:8,15 36:2 |
| <b>start</b> 4:17 5:18<br>37:21,24       | <b>table</b> 21:8  | <b>trash</b> 7:11                                  | <b>w</b>   | <b>zone</b> 40:11   |
| <b>started</b> 20:1                      | <b>TACO</b> 14:23,24<br>20:18,23                             | <b>treat</b> 9:15                                  | <b>wall</b> 8:14,15,21<br>9:12,13 42:1   |   |
| <b>state</b> 17:23 19:2,6<br>37:13,22    | <b>tact</b> 36:12 37:1                                       | <b>treated</b> 9:16                                | <b>walls</b> 42:1,15   |   |
| <b>statement</b> 4:13                    | <b>talk</b> 4:11 5:2 24:3<br>25:16 34:20                     | <b>treating</b> 44:8                               | <b>wanted</b> 34:16  |   |
| <b>step</b> 19:14,20                     | <b>talking</b> 32:16,18                                      | <b>treatment</b> 17:6,21<br>19:4 42:11             | <b>waste</b> 7:4,7,8,22<br>10:7 12:5,8 13:1,9<br>14:5,8 15:7,11,19<br>16:2,11 21:12<br>29:8,9,13,19,21<br>32:22 34:1,2 |   |
| <b>Stephanie</b> 4:24<br>5:18,22 42:4    | <b>taxpayers</b> 42:14,<br>17                                | <b>trespassers</b> 10:4                            | <b>wastes</b> 7:10   |   |
| <b>steps</b> 19:9                        | <b>technical</b> 24:18,<br>23 25:10                          | <b>triangle</b> 22:16                              | <b>water</b> 9:15,18<br>10:8,17 21:8,9,10,<br>11 30:14 38:21<br>40:7 42:11,24<br>43:3,4 44:9                           |   |
| <b>storms</b> 38:15                      | <b>technology</b> 11:24<br>12:3                              | <b>trustee</b> 28:10                               | <b>waters</b> 43:2   |   |
| <b>streamlined</b><br>24:17              | <b>term</b> 17:22 19:5<br>21:15 40:19,21<br>41:12            | <b>Trustees</b> 21:23                              | <b>ways</b> 21:14 42:21  |   |
| <b>stretch</b> 39:1                      | <b>testimony</b> 37:10                                       | <b>U</b>   | <b>web</b> 45:2  |   |
| <b>strongly</b> 41:8                     | <b>thing</b> 29:17 35:9                                      | <b>Uh-huh</b> 31:19                                |  |   |
| <b>study</b> 8:6 9:4<br>19:12 25:10 36:6 |  | <b>uncontained</b> 7:10                            |  |   |
| <b>stupid</b> 22:3                       |  | <b>understand</b> 41:23                            |  |   |
| <b>surgeon</b> 43:18                     |  | <b>underway</b> 41:24                              |  |   |
| <b>subject</b> 34:10                     |  | <b>undo</b> 44:19                                  |  |   |
| <b>substances</b><br>25:17,18            |  | <b>undone</b> 39:6                                 |  |   |